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PENAL INSTITUTION HOSPITAL TREATMENT OF VENEREAL DISEASES¹

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The care and treatment of venereal diseases is of the greatest importance in the work of the medical department of a penal institution. When one takes into consideration that in the year ending August 1, 1917, we received at Sing Sing Prison 927 inmates; we found 20% of them having a positive Wasserman reaction, made up as follows:

Out of 186 positive reactions we found

12 % — 4 plus

1½% — 3 plus

1¼% — 2 plus

5 % — 1 plus

a total of about 20%.

As to the Wasserman reaction, it does not appear generally until from the fifteenth to the twenty-fifth day following the appearance of the chancre. In secondary syphilis the percentage of positive reactions was about 95%; in tertiary syphilis, 75%; in latent syphilis, 50%, making on the whole about 85% of the cases of active syphilis giving positive reactions.

The diagnostic value of the reaction: The Wasserman reaction is not absolutely specific for syphilis, for it has been obtained in other diseases, such as sleeping sickness, malaria, leprosy and scarlet fever, but from a clinical standpoint in a penal institution it can be regarded for all practical purposes as specific for syphilis.

It has been our practice for some time past to make a complete physical examination of all inmates upon their entering the prison. This includes urinalysis, Wasserman test, and, if indications warrant it, a sputum test. All venereal cases are at once isolated, confined in one company, have separate tables at which they eat, and separate places to sleep and work. We do not permit at any time during an inmate's term his working in the mess, kitchen, bake or barber shop if he is afflicted with venereal diseases.

We have for the past two years considered these sexual diseases as a hospital problem, and they have received our careful attention as a duty we owe to the inmate and for the protection of society when

¹Read before the Prison Physician Section of the American Prison Association, New Orleans, November 19, 1917.

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these men leave our institution. In an institution like ours at Sing Sing it is quite an easy matter to control your cases; you are able to treat them and keep them under constant observation and at different intervals check up your results.

Speaking of syphilis, there are several ways in which a penal institution can contribute to the management of this disease. First, a thorough examination of the inmate when he enters the prison. (As I stated above, about 20% of our prison population at Sing Sing respond to a positive Wasserman reaction.) Through the courtesy of the New York State Department of Health, we send all our specimens to them for examination. I believe that it would be possible for other prisons to make the same arrangement with their State Department of Health. It would be better if we had a serologist in our large institutions for our hospital laboratories. As soon as syphilis is recognized in the new inmate, he is placed in a separate company, thereby protecting the staff and the other inmates from infection.

At Sing Sing Prison we have a visiting aurist and an urologist, who co-operate with our staff in making a study of our cases. We are therefore better able to judge of our patients' resistance and reactions to our treatment. All treatments and observations are carefully charted, and in cases which show cerebral disturbances we do a lumbar puncture.

ISOLATION

Syphilis is a contagious disease, and as such should be isolated, and as a large percentage of our inmates are ignorant of its contagious character isolation is important. All institutions should have a section of their hospital set apart for the care of these cases. When syphilis is in the active stage, they should be isolated in separate wards, thereby controlling your patients better. I cannot urge this too strongly, as a careless and a haphazard control lessens the effectiveness of your treatment. The patient must feel that you are interested in his welfare, and when you obtain his confidence you will be able to direct his course toward a cure. Syphilis is less contagious than typhoid fever or tuberculosis, and it exists as a problem only in its primary and secondary stages, and as we take a Wasserman test on all new admissions within three days of their arrival, we do not get many unrecognized cases, and this in itself is the greatest protection from contagion.

TREATMENT

Syphilis cannot be cured with one injection of any one of the well-known arsenal preparations now on the market, and the physician who states definitely as to just how many injections are necessary is merely guessing, as there is no standard to go by in a given case of syphilis. It is a good plan to destroy the primary lesion, and this should be done whenever possible. Unless mercury disagrees with, or the patient is exceedingly susceptible to its physiological effects, we use it continuously during the secondary stage. We usually give biniodide grain 1/24, three times a day, increasing one pill until symptoms of ptyalism appear; then we reduce the dose.

It has also been our practice to give inunctions of mercurial ointment, in some cases using about 1 drachm a day for five days, and then omitting two days. This method produces excellent results. While we are giving these inunctions we use potassium iodide internally, which seems to be a great advantage. Unless untoward symptoms arise, we give a series of from sixty to seventy inunctions.

As to the hypodermic use of mercury in syphilis we have tried salicylate of mercury, administering it in doses of one grain once a week, all injections being made in the deep muscles of the gluteal region. So far, with this method of treatment, our results have not been satisfactory. We have found that in a series of ten cases the results of the Wasserman findings were uninfluenced by the intermuscular injections.

As shown by the figures collected at Sing Sing during the past year, diarsenol, salvarsan and neosalvarsan offer the greatest possibilities in the treatment of syphilis, and the method of administering these has been by intravenous injections of a dilute alkaline solution. We have diluted our solutions from 25 cc. to 200 cc. solution. We found that in the majority of cases we had to give five or six injections, dose at each injection being 0.6 gram each.

As to the method of preparing the solution, or the method of injecting it, it is unnecessary to discuss in this paper. I am persuaded to believe that no physician or surgeon would presume to use a solution made under conditions other than those which will assure a perfect technic in its preparation. One point I wish to particularly impress upon you is the importance of the purity of the water which is to be used. Commercial distilled water is absolutely worthless and has been known to cause grave reactions, owing probably to faulty apparatus, careless attention or improper knowledge of the proper

manner of sterilizing containers. The water used should be freshly distilled—never more than two days old. I also recommend that the prepared solutions be passed through a small piece of sterile cotton just before using. There has been but very little ill-effects accompanying these injections. Some extremely nervous patients complained of faintness, and others of smarting pains at the point of injection; this was probably due to a slightly injured vein. We examine the urine of all patients for albumin and casts to determine the condition of the kidney before administering the intravenous injection, and if we find any evidence of renal trouble we use extreme caution.

We have never found it necessary to put a patient to bed after the treatment. Usually we give him a dose of Epsom salts to remove the drug as it is eliminated from the system.

As to contra-indications. When one considers the millions of doses of salvarsan, neosalvarsan and diarsenol which have been used, and the relatively small number where ill-effects have been obtained, no one need be afraid to use it except in severe, uncompensated heart lesions, emphysema, aortic aneurysm, coronary sclerosis, Bright's Disease, and advanced diseases of the brain and spinal cord. The two potent remedies in the treatment of syphilis are mercury and the arsenicals—salvarsan and its allies.

The following table will show the results of different treatments administered at Sing Sing Prison on patients having a four plus Wasserman reaction and the conditions found six months after the treatment:

Number Treated.	Cured	Improved	Unimproved
Patients receiving 6 tubes each of 0.6 gram. diarsenol—			
19	15 or 79%	4 or 21%	0 or 0%
Patients receiving 70 mercurial rubs and two tubes each 0.6 gram. diarsenol—			
40	26 or 65%	12 or 30%	2 or 5%
Patients receiving 50 rubs and 3 tubes each of 0.6 gram. diarsenol—			
14	12 or 85%	2 or 15%	0 or 0%
Patients treated with salvarsan, 0.6 gram., 5 tubes each—			
8	4 or 50%	3 or 37½%	1 or 12½%
Patients treated with neosalvarsan, 0.9 gram. each, 5 tubes—			
4	3 or 75%	1 or 25%	0 or 0%
Patients treated with venarsen, 5 tubes each—			
9	0 or 0%	0 or 0%	9 or 100%
Patients treated by intra-muscular injections of salicylate of mercury, 1-grain each dose—			
10	0 or 0%	1 or 10%	9 or 90%
Patients treated by mercurial inunctions—			
117	13 or 11%	37 or 31%	67 or 58%

COMPARATIVE TABLE

Showing Cases Treated at Sing Sing Prison with Diarsenal, Salvarsan, Neosalvarsan and Venarsen, and the Results Found After Six Months of Treatment, the Patients so Treated Having a Four-Plus Wasserman Reaction

Medication	Patients	Rubs	Cured	Imp.	Not Imp.
Diarsenol6—0.6 Amp.	19	0	15	4	0
Diarsenol2—0.6 Amp.	40	70	26	12	2
Diarsenol3—0.6 Amp.	14	50	12	2	0
Salvarsan5—0.6 Amp.	8	0	4	3	1
Neosalvarsan5—0.9 Amp.	4	0	3	1	0
Venarsen5—0.0 Amp.	9	0	0	0	9
Mercury salicylate.1 Grain	10	0	0	1	9
Mercury inunctions	117	43 Ea.	13	37	67

NOTE.—The 117 patients treated with mercurial inunctions received a total of 5,001 inunctions.

CARE AND TREATMENT OF GONORRHEA

In the year ending July 31, 1917, out of 927 inmates admitted to prison we made 417 urethral smears, and found 129 of them to be positive. Our acute urethritis cases were treated in the usual manner—internal and local medications, together with urethral injections. But it is the chronic urethritis, the class of cases most common in prison, I desire to discuss more fully. The general treatment consists of the avoidance of all excesses; a simple diet and salol given internally in 10 to 15 grain doses three times a day. If the urethritis is limited to the anterior urethra, we irrigate with permanganate of potassium (1-6000). During the past year we have tried with considerable success intravenous and intraprostatic injections of methylphenol and normal-phenol serum, as suggested by Dr. Cano and our urologist, Dr. Terry M. Townsend of New York City, who is in charge of the Genito-Urinary Clinic at Sing Sing Prison. He summarizes his experiences as follows:

“The treatment of gonorrhea by intravenous injections of this medicament until the disease reaches its declining stage prevents complications; (2) pain, discomfort and all other subjective and objective symptoms usually disappear after the fourth or fifth injection, and definite clinical and bacteriological cures are effected in from thirty to forty days; (3) ten injections are usually sufficient when the infection is attacked at its onset; (4) gonorrhea, when complicated by primary or secondary syphilis, successfully responds to the treatment if additional anti-syphilitic medication is employed;

(5) local complications, such as epididymitis, buboes, abscesses, etc., together with systemic manifestations such as toxemia and the paragonococcal lesions, disappear more rapidly with this form of treatment than with any other, and surgical interference is seldom necessary.

"The intravenous injection of 10 cc. of the methyl-phenol serum, or an intraprostatic serum, is nontoxic—in no manner does it jeopardize the recipient's life or produce any deleterious effects. Its role is that of an antiseptic, and its effects are due to the action of phenol on the gonococcus and its toxins at the site of infection (locally) and within the body (systemically) through the blood stream. The presence of methylene blue in this product is of extreme importance; this substance acts as a protector to prevent the phenol from exerting its direct action on the red blood corpuscles. Methyl-phenol serum is not a panacea, nor can it work miracles; hence judicious use, with full understanding of its action, is essential to success.

"The frequency of gonorrheal prostatitis is so great that it can be looked upon as a part and parcel of every gonorrheal infection. As soon as the infection is recognized we inject normal-phenol serum into the prostate gland. The contra-indications to intravenous and intraprostatic injections are: (1) Advanced nephritis; (2) extensive organic cardiac lesions, and (3) auto-intoxications."

The technique of intraprostatic injections is simple. The patient is placed in the lithotomy position and the perineal triangle is shaved and iodized. The middle finger of the left hand, appropriately clothed in a rubber covering, is inserted into the rectum and hooked above the gland. The scrotum and testicles are retracted above the pubic arch; the needle, which should be about 7.5 c.m. long and of 19 m.m. gauge, is held firmly in the right hand and inserted into the perineal body in the raphe about 2 c.m. above the anus. This avoids puncture of the rectum or bulb. The location of the point of the needle can be determined by the rectal palpating finger, and this is guided into the central portion of one lobe, or into the most prominent elevation of the prostatic enlargement. We have seen abscesses thus tapped spout forth free pus. If free pus exudes it should be permitted to drain away before injecting the serum. If an appreciable amount of blood flows through the needle, the position of the point should be altered to avoid direct injection into the circulation. Depots of serum should be deposited throughout each prostatic lobe by slight withdrawal and reinsertion of the needle into different areas of prostatic tissue after injecting in each four or five c.c. Care should

be taken not to change the general horizontal plane of direction. The amount of serum adequate to produce physiological effects varies from 10 to 15 c.c. per lobe. Some cases demand more. The largest amount that we have injected at Sing Sing Prison in a single lobe was 50 c.c. After one lobe has been injected it is necessary to withdraw the needle only partially until it is free from the capsule, and then insert it into the opposite lobe without piercing the perineum a second time.

In conclusion, Dr. Townsend states: "Methyl-phenol serum may be repeatedly injected intravenously in doses of 10 c.c. into adults at intervals of forty-eight hours without danger or detriment to life or health; (2) its use has a tendency to prevent complications by killing or rendering inert the invading gonococcus at the site of residence; (3) for the same reason and because of the neutralization of gonotoxins it shortens the life of gonorrhea and alters a vicious into a benign infection; (4) intraprostatic injections of normal-phenol serum are harmless when correctly performed, and shortens the time required to cure chronic gonorrheal prostaticitis; (5) the treatment of gonorrhea by Cano's theory of intravenous injections of methyl-phenol serum and intraprostatic injections of normal-phenol serum is firmly based upon chemico-biological facts and accepted authoritative theories, and bears the same relation to gonorrhea that intravenous injections of arsenicals bear to syphilis."